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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,833	01/15/2004	Tatsuro Uchida	1232-5254	8301
27123	7590	01/26/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			BLEVINS, JERRY M	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/759,833

Applicant(s)

UCHIDA, TATSURO

Examiner

Jerry Martin Blevins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 08 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 11/08/2005 have been fully considered but they are not persuasive.

In particular, the optical path converting structure (Figures 2A and 2B, element 3) and the light emitting device (2) taught by US Patent to Ouchi, number 6,829,398, are integral, as depicted by light emitting device (5). Therefore, the light emitting device (5), consisting of semiconductor laser (2), itself, performs the function of changing a radiation angle of the light. See column 9, line 21 – column 11, line 64.

### ***Claim Objections***

Claim 6 is objected to because of the following informalities:

The claimed "image" has no antecedent basis in the base claim 1. Examiner interprets the claimed "image" to refer to an image of the claimed laser of claim 1/

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, the term "sheet-like", found on lines 2 and 12 of claim 1 and line 6 of claim 3, renders the claims to be indefinite, because the scope of the expression is unclear.

For examination purposes, examiner interprets "sheet-like" to mean "thin."

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Ouchi.

Regarding claim 1, Ouchi teaches an optical connector device (Figure 2B) comprising a sheet-like optical waveguide layer (7), a semiconductor laser (5) having a function capable of changing a radiation angle of a light (column 9, line 21 – column 11, line 64), an optical path changing structure (3) for changing an optical path of the light

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from the semiconductor laser; and light-receiving elements (6) for receiving the light from the semiconductor laser through the sheet-like optical waveguide layer.

Regarding claim 3, Ouchi teaches that the optical path changing structure is disposed within the sheet-like optical waveguide layer (Figure 2B).

Regarding claim 4, Ouchi teaches that the semiconductor layer is a surface-emitting laser (column 2, lines 19-24).

Regarding claim 7, Ouchi teaches an optical and electrical circuit combined board (Figure 4) comprising the optical connector device according to claim 1 formed so as to obtain electrical connection with an electrical circuit board (column 8, lines 23-25), wherein a part of or whole signals from the electrical circuit board are transmitted by optical wirings as transmission of optical signals using the optical connector device (column 12, lines 13-32).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5, and 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Ouchi in view of US Patent to Suyama et al., number 6,055,255.

Regarding claim 2, Ouchi teaches the limitations of the base claim 1. Ouchi does not teach that the radiation angle is changed by an injection current, an applied

voltage or temperature control. Suyama teaches that the radiation angle of a laser is changed by an injection current (column 8, lines 11-24, column 10, lines 18-29, and Figure 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to change the radiation angle of the laser of Ouchi by an injection current, as taught by Suyama. The motivation would have been to sustain the laser oscillation (Suyama, column 2, lines 13-34).

Regarding claim 5, Ouchi teaches the limitations of the base claim 4. Ouchi does not teach that the surface-emitting laser is formed with a current constricting layer in a vicinity of an active layer. Suyama teaches a semiconductor laser (Figure 1, element 100) formed with a current constricting layer (10) in a vicinity of an active layer (4). It would have been obvious to one of ordinary skill in the art at the time of the invention to form the laser of Ouchi with a current constricting layer in a vicinity of an active layer, as taught by Suyama. The motivations would have been to reduce noise, decrease light leakage, prevent deterioration of optical characteristics and improve the reliability of the semiconductor laser (Suyama, column 4, line 58 – column 5, line2).

Regarding claim 6, Ouchi teaches the limitations of the base claim 1. Ouchi does not teach that the radiation angle of the image is the radiation angle of a far-field image. Suyama teaches that the radiation angle of the image is the radiation angle of a far-field image (Figure 8 and column 10, lines 18-29). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ouchi such that the radiation angle of the image is the radiation angle of a far-field image, as taught by

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Suyama. The motivation would have been to sustain the laser oscillation (Suyama, column 2, lines 13-34).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMB



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